

**IN THE CLAIMS:**

Please amend the claims as follows:

Claim 1 (Original): A radiation detector comprising:

radiation detecting means for detecting incident radiation to output a detected signal,  
signal processing means for processing the detected signal from the radiation detecting means, and

a wiring substrate section having a wiring substrate with a conduction path provided for guiding the detected signal between a signal input surface and a signal output surface, the radiation detecting means and the signal processing means being connected to the signal input surface and the signal output surface, respectively, wherein

the wiring substrate includes a glass substrate formed of a predetermined glass material having a radiation shielding function and provided with a through hole, and a conductive member provided in the through hole to serve as the conduction path for establishing electrical continuity between the signal input surface and the signal output surface, and

the radiation detecting means, the wiring substrate section, and the signal processing means are located in that order along a predetermined alignment direction, with the signal processing means being disposed with respect to the wiring substrate within an area other than an area on an extension of the through hole.

Claim 2 (Original): The radiation detector according to Claim 1, wherein the wiring substrate has an electrode pad provided at a predetermined portion facing the signal processing means on the signal output surface of the glass substrate and a wiring for electrically connecting between the electrode pad and the corresponding conductive member.

Claim 3 (Original): A radiation detector comprising:

radiation detecting means for detecting incident radiation to output a detected signal,

signal processing means for processing the detected signal from the radiation detecting means, and

a wiring substrate section having a wiring substrate with a conduction path provided for guiding the detected signal between a signal input surface and a signal output surface, the radiation detecting means and the signal processing means being connected to the signal input surface and the signal output surface, respectively, wherein

the wiring substrate includes a glass substrate formed of a predetermined glass material having a radiation shielding function and provided with a through hole, and a conductive member provided in the through hole to serve as the conduction path for establishing electrical continuity between the signal input surface and the signal output surface, and

the radiation detecting means, the wiring substrate section, and the signal processing means are located in that order along a predetermined alignment direction, while an opening of the through hole provided in the wiring substrate from the signal input surface to the signal output surface is blocked with a shield member having a radiation shielding function.

Claim 4 (Original): The radiation detector according to Claim 3, wherein the shield member is configured such that a predetermined shield material having a radiation shielding function is filled in the through hole.

Claim 5 (Original): The radiation detector according to Claim 3, wherein the shield member is a bump electrode which is formed of a predetermined shield material having a

radiation shielding function and which is electrically connected to the conductive member provided in the through hole.

Claim 6 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 5~~, wherein the glass substrate is formed of the glass material that contains lead.

Claim 7 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 6~~, wherein the conductive member is formed on an inner wall of the through hole provided in the glass substrate.

Claim 8 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 6~~, wherein the conductive member is filled in the through hole provided in the glass substrate.

Claim 9 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 8~~, wherein the glass substrate is provided with the plurality of through holes while a plurality of hollow glass members that are open at both ends are fused together and integrally formed.

Claim 10 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 9~~, wherein the radiation detecting means includes a scintillator for generating scintillation light by radiation made incident, and a semiconductor photodetecting element for detecting the scintillation light from the scintillator.

Claim 11 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 9~~, wherein the radiation detecting means includes a semiconductor detecting element for detecting radiation made incident thereon.

Claim 12 (Currently amended): The radiation detector according to Claim 1 ~~any one of Claims 1 to 11~~, wherein at least either the wiring substrate section and the radiation detecting means or the wiring substrate section and the signal processing means are electrically connected to each other via a bump electrode.

Claim 13 (New): The radiation detector according to Claim 3, wherein the glass substrate is formed of the glass material that contains lead.

Claim 14 (New): The radiation detector according to Claim 3, wherein the conductive member is formed on an inner wall of the through hole provided in the glass substrate.

Claim 15 (New): The radiation detector according to Claim 3, wherein the conductive member is filled in the through hole provided in the glass substrate.

Claim 16 (New): The radiation detector according to Claim 3, wherein the glass substrate is provided with the plurality of through holes while a plurality of hollow glass members that are open at both ends are fused together and integrally formed.

Claim 17 (New): The radiation detector according to Claim 3, wherein the radiation detecting means includes a scintillator for generating scintillation light by radiation made incident, and a semiconductor photodetecting element for detecting the scintillation light from the scintillator.

Claim 18 (New): The radiation detector according to Claim 3, wherein the radiation detecting means includes a semiconductor detecting element for detecting radiation made incident thereon.

Claim 19 (New): The radiation detector according to Claim 3, wherein at least either the wiring substrate section and the radiation detecting means or the wiring substrate section and the signal processing means are electrically connected to each other via a bump electrode.